

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) An optical module comprising:

a substrate provided with a groove ~~that is being~~ formed in a surface thereof ~~to extend from a first end of the substrate toward a second end of the substrate opposite from the first end of the substrate but not to extend to the second end of the substrate,~~ the groove having a first slope surface crossing the surface of the substrate at an obtuse angle and a second slope surface facing to the first slope surface and crossing the surface of the substrate at an obtuse angle;

~~an optical element mounted on the surface of the substrate between the second end of the substrate and an end of the groove; and~~

~~an optical part a lens being put in the groove;~~

~~wherein an adhesive is applied to a portion of at least the second slope surface except but not to the first slope surface of the groove at all so as to fix the optical part lens in the groove in a structure in which the optical part lens is in contact with or in the proximity of the first slope surface and the second slope surface, and~~

~~wherein the lens is adhered to the portion of at least the second slope surface by the adhesive while the lens is not adhered to the first slope surface at all.~~

2. (original) An optical module as claimed in claim 1, wherein the adhesive is an ultraviolet ray curable type epoxy resin.

3. (currently amended) An optical module comprising:

a silicon substrate provided with a V-shaped or trapezoidal groove ~~that is being~~ formed in the surface of the silicon substrate by anisotropic etching, the groove having a first slope surface and a second slope surface facing to the first slope surface and crossing the surface of the substrate at an obtuse angle;

~~an optical element mounted on the surface of the silicon substrate; and~~

~~an optical part put a cylinder-shaped lens being fixed in the groove;~~

wherein an adhesive is applied to a portion of at least the second slope surface except but not to the first slope surface of the groove so as to ~~fix the optical part adhere a side surface of the cylinder-shaped lens to the portion of at least the second slope surface~~ in the groove in a structure in which the ~~optical part side surface of the cylinder-shaped lens~~ is in contact with or in the proximity of the first slope surface and the second slope surface, and wherein a side of the cylinder-shaped lens is adhered to the portion of at least the second slope surface by the adhesive while the cylinder-shaped lens is not adhered to the first slope surface at all.

4. (original) An optical module as claimed in claim 3, wherein the adhesive is an ultraviolet ray curable type epoxy resin.

5. (currently amended) A method for manufacturing an optical module, comprising:

a groove forming step of forming a groove in a surface of a substrate from a first end of the substrate toward a second end of the substrate opposite from the first end of the substrate but not to extend the groove to the second end of the substrate, the groove having a first slope surface crossing the surface of the substrate at an obtuse angle and a second slope surface facing to the first slope surface and crossing the surface of the substrate at an obtuse angle;

a optical element mounting step of mounting an optical element on the substrate having the groove formed in the groove forming step;

~~an optical part a lens~~ putting step of applying an adhesive to a portion of at least the second slope surface except but not to the first slope surface of the groove formed in the groove forming step and putting the ~~optical part lens~~ in the groove in such a manner as to be in contact with or in the proximity of the first slope surface and the second slope surface while any other adhesive is applied to the first slope surface; and

an adhesive curing step for curing the adhesive applied in the ~~optical part lens~~ putting step.

6. (currently amended) A method for manufacturing an optical module, comprising:

a groove forming step of forming a V-shaped or trapezoidal groove in a surface of a silicon substrate by anisotropic etching, the groove having a first slope surface and a second slope surface facing to the first slope surface;

an optical element mounting step of mounting an optical element on the surface, of the silicon substrate, having the groove formed in the groove forming step;

an optical part a cylinder-shaped lens mounting step of applying an adhesive to a portion of at least the second slope surface except but not to the first slope surface of the groove formed in the groove forming step and putting the optical part cylinder-shaped lens in the groove in such a manner as to be in contact with or in the proximity of the first slope surface and the second slope surface under the condition that any other adhesive is applied to the first slope surface; and

an adhesive curing step of curing the adhesive applied in the optical part cylinder-shaped lens putting step.

7. (new) An optical module as claimed in claim 1,

wherein the lens is cylinder-shaped, and the adhesive adheres a side surface of the cylinder of the lens to the portion of at least the second slope surface except the first slope surface.

8. (new) An optical module as claimed in claim 1,

wherein the first slope surface and the second slope surface are extended in the groove from the first end of the substrate toward the second end of the substrate but not to the second end of the substrate.

9. (new) An optical module as claimed in claim 1,

wherein the portion of at least the second slope surface is limited to an area within the second slope surface, and the lens is adhered only to the area of the second slope surface.

10. (new) A method for manufacturing an optical module as claimed in claim 5, wherein a cylinder-shaped lens is utilized as the lens, and a side surface of the cylinder-shaped lens is adhered to the portion of at least the second slope surface except the first slope surface after the adhesive curing step.

11. (new) A method for manufacturing an optical module as claimed in claim 6,

wherein the anisotropic etching in the groove forming step is applied to a region in the surface of a silicon substrate being extended from a first end of the substrate toward a second end of the substrate opposite to the first end of the substrate so that both the first slope surface and the second slope surface are extended in the groove from the first end of the substrate toward the second end of the substrate but not to the second end of the substrate.